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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/634,384	08/09/2000	Harold R. Blomquist	TRW(VSSIM)4784	5166

7590 09/10/2002

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EXAMINER

MILLER, EDWARD A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/634,384

Applicant(s)

BLOMQUIST ET AL.

Examiner

Edward A. Miller

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-19 and 21-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-19 and 21-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3641

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 11-19 and 21-44 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The presence of two distinct groups of claims has been previously noted in the restriction requirement, for example. However, upon considering the specification, there appears to be only one disclosed mode of practicing the invention, which is to use electro-exploded powder. Therefore, the claims are not adequately described such as to convey to one of ordinary skill in the art what the intended coverage of the claims is. These claims are based upon an inadequate disclosure.
3. Claims 11-19 and 21-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

See paragraph 2 above. The presence of the various distinct sets of claims as written, indicates that there are two distinct inventions. However, a consideration of the specification shows that there is only one exemplified disclosure. Therefore, at least some of the claims are based upon an inadequate disclosure, or the claims are misdescriptive in implying two distinct inventions, as written. Applicant is called upon to clearly state on the record whether the disclosure with electro-exploded metal powder, has only fines, has only agglomerates, or includes a mixture of both. As written, and in view of the sole exemplary support, it would appear that the two sets of claims are misdescriptive and incorrect in implying two separate, disparate things, when in fact there are only one electro-exploded metal powder. Such is indefinite. In fact, the situation is so confusing that the

Art Unit: 3641

examiner has rejoined the inventions or species, as it is not clear what the differences, if any, are. It may be that the sole differences are differences in words, and that the physical invention, which appears to be a single thing as set forth in the specification, is unitary, that is electro-exploded metal powder is what it is, and applicants' language merely serves to confuse a person of ordinary skill in the art. As to this, it cannot be found that one of ordinary skill in the art can reasonably determine what the metes and bounds of the claimed invention are, because of the varying language of the claims. Also, it now appears that the claims are unduly multiplied in view of the sole disclosure which is set forth. These are exemplary.

4. Claims 11-19 and 21-44, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Baginski, in view of Halcomb et al., Dixon et al., Wheatley and Lundstrom.

Baginski teaches the basic invention of electro-explosive primers in broad outline at col. 1, lines 23-36, with a pyrotechnic mix around a bridgewire. The pyrotechnic mix or composition is set forth at col. 8, line 60- col. 9, line 9 with certain advantages thereof. Further, at col. 9, lines 61-67, the compositions may be the usual metal fuel/oxidizer mixes known in the pyrotechnic arts. However, the specifics of the metal particulates are not specifically taught. Halcomb et al. teach a similar device, with the pyrotechnic composition further disclosed at col. 1, lines 62-68 and col. 2, lines 40-47, with metal fuel plus metal oxide oxidizer, as at col. 9, line 65 of Baginski. However, the particle size details are still not taught. Dixon et al. in the Abstract, teach that pyrotechnic ignition mixtures of metal and oxide oxidizer may be around 0.1 microns in size, and that the aluminum, as is notoriously well known, is in the form of particulates which are coated with a surface oxide layer, which serves to desensitize the metal powder. Wheatley teaches exploded metal powder which is used with salt oxidizers, and use of this form of metal powder would have been obvious, in the expectation of results in accordance with the properties shown in similar pyrotechnic compositions.

Art Unit: 3641

See The Abstract and col. 1, lines 45-55 of Wheatley. Lundstrom further shows, with ignition compositions at col. 2, lines 53-57 and at col. 3, lines 7-24, that hot particulates are part of the ignition mechanism, and that ignition may be promoted with the use of small particle size metals or metal oxides. Use of agglomerate particles is notoriously well known in the art. In short, substitution of specific metal fuel particulate compositions for similar metal fuel particulates for the expected results would have been obvious. The electro-exploded metal particulates of Wheatley inherently include agglomerates, as applicant's disclosure teaches using the identical product by the identical manufacturer. It is well settled that optimizing a result effective variable is well within the expected ability of a person or ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Mondays-Thursdays, from about 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. The Group fax number is (703) 305-7687.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
September 9, 2002



EDWARD A. MILLER
PRIMARY EXAMINER

EDWARD A. MILLER
PRIMARY EXAMINER